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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/570,048	12/12/2006	Martin David Bloomberg	056647-0009	4885
46127 7590 12/05/2011 HEENAN BLAICKIE LLP BAY ADELAIDE CENTRE 333 BAY STREET, SUITE 2900, P.O. BOX 2900 TORONTO, ON M5H 2T4 CANADA				
EXAMINER LUDLOW, JAN M				
ART UNIT 1773		PAPER NUMBER		
NOTIFICATION DATE 12/05/2011		DELIVERY MODE ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

rgraham@heenan.ca
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Office Action Summary**Application No.**

10/570,048

Applicant(s)

BLOOMBERG ET AL.

Examiner

JAN LUDLOW

Art Unit

1773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 November 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 5) ☒ Claim(s) 1 and 6-8 is/are pending in the application.
- 5a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 6) ☐ Claim(s) ____ is/are allowed.
- 7) ☒ Claim(s) 1, 6-8 is/are rejected.
- 8) ☐ Claim(s) ____ is/are objected to.
- 9) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF-03)
Paper No(s)/Mail Date ____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

1. Claims 2, 6-8 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

1. See below.

2. Claims 2, 6-8 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

While there is a vague description of extracting grape skins with water, steeping to ferment residual sugar, and evaporation to concentrate and remove alcohol, there is no description of how much water is used, what type of grapes, what mass of grape skins, time and temperature of steeping, resulting volume of extract after evaporation, etc. There is absolutely no description of the cabbage extraction. Therefore, there is not an enabling description of how to make the cabbage extract. In particular, claims 2, 7 are not enabled because there is no way of determining what 27.5 % or 10-27.5% of pH indicator means, since there is no way to reproduce the extraction process. There is ABSOLUTELY NO DESCRIPTION of the process of extracting the cabbage. Is the cabbage crushed and the leached liquid collected? Is there an extracting liquid? If so, how much? Is it then fermented and concentrated by evaporation as in the grape

extraction process? The description of extracting the grapes is unclear in and of itself—the juice is removed and then the skins are extracted with an unknown amount of water. Then a steeping process occurs (to the juice or to the skin extract—it's unclear which) to ferment the sugars to alcohol, and vacuum evaporation is performed to remove alcohol. Since applicant has not disclosed the mass of the grapes or how much water or how much evaporation, there is ABSOLUTELY NO WAY of reproducing this process and to make the same extract as applicant has made, much less any meaningful sense made of a weight basis of a completely undefined extract. For example, extracting 5 g of grape skins with 100 ml of water and concentrating to 80 ml results in a very different extract than extracting 20 g of grape skins with 20 ml of water and concentrating to 5 ml. Further, it is unclear how this process is applicable to red cabbage—is juice removed from the cabbage (to make cabbage juice or wine?) and then the remaining cabbage “skin” extracted with water (again, how much cabbage, how much “skin”, how much water?), fermented to make alcohol? And then the alcohol evaporated? The public has absolutely no way of knowing because applicant hasn't disclosed any process for extracting indicator from cabbage whatsoever. Furthermore, the instant disclosure does not enable the range of 10-27.5% for the cabbage extract as in claim 7. The instant disclosure teaches 10-20% (p. 3, last line) for grape extract and then teaches that a higher concentration is required for cabbage extract (p. 4, lines 1-3), but does not teach that 10% is the lower end of the range for cabbage extract. Page 4, penultimate line, enables 27.5% only.

3. Claims 2, 6-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In that there is no description of how the indicator is extracted, it is not clear what "a concentration of about 27.5%" means within the concentrate. For example adding 1 part indicator extract having 1 M active ingredient to 9 parts water (about 10%) results in the same composition as adding 5 parts indicator having 0.2 M active ingredient to 5 parts water (about 50%).

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
8. Claims 2, 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fisher (5278132) in view of Freadman (6589761).

Fisher teaches a concentrate having a pH modifying agent and pH indicator, the concentrate having the instant properties, including pH 4-6 indication (col. 4, line 37). Suitable indicators are methyl red, resorcin blue, 2,5-diphenol and chlorophenol red (col. 3, lines 30-32). With respect to claims 6 and 8, the concentrations of the reagents other than the cabbage indicator extract are taught in Example 1.

Fisher fails to teach a naturally occurring pH indicator.

Freadman teaches that a natural food or plant pH indicator from red cabbage or grapes can be used as an alternative to methyl red, resorcin blue, 2,5-Diphenol and chlorophenol red (col. 4, line 61, col. 5, line 30, col. 6, lines 9 and 67, col. 8, lines 49-59).

It would have been obvious to use a cabbage extract indicator in the invention of Fisher because it is an alternative to the indicators of Fisher as taught by Freadman. With respect to claims 2, 7 to the extent that they are definite, it would have been obvious to optimize the amount of indicator in order to attain the coloration properties taught by Fisher. That is, one of ordinary skill would understand that raw natural extract of cabbage contains a lower concentration of pH indicator than the purified indicator of Fisher, and it would have been obvious to use a greater volume of less pure indicator extract in order to achieve the same result.

9. The declaration under 37 CFR 1.132 filed November 25, 2011 is insufficient to overcome the rejection of claims 2, 6-8 based upon Fisher in view of Freadman as set forth in the last Office action because:

The declarant opines that "red cabbage extract" is a term of art that one of ordinary skill would have understood to be commercially available concentrated red cabbage extract. This argument is not persuasive because applicant previously indicated that one of ordinary skill would have known how to make cabbage extract as evinced by [www.chemistryland.com/CHM/107Lab/Lab 1/Lab 1 PreparingCabbageExtract.htm](http://www.chemistryland.com/CHM/107Lab/Lab%201/Lab%201%20PreparingCabbageExtract.htm), made of record June 22, 2010, which does not provide any concentration after aqueous extraction of an indeterminate quantity of cabbage with an indeterminate quantity of water. Thus, there are plural methods of making cabbage extract known to one of ordinary skill, and the disclosure as filed provides no direction as to which method is to be used. There is no indication in the disclosure as filed that a commercial product was used.

Declarant argues that the instant invention is an unexpected result, but from Exhibit C of the declaration filed November 25, 2011, at approximately 0.07% indicator, grape skin, cabbage and lichen all show a coloration of 1 and at 0.20%-0.25%, grape skin and cabbage both show a coloration of 4. Grape skin and lichen were not tested at the higher concentrations that red cabbage was; thus it cannot be determined whether an unexpected result was achieved. Further, the footnote indicates that the literature suggests that grape skin extract may not be stable at certain pH values. If the literature suggests this, how is instability an unexpected result? With respect to using a high concentration to achieve a darker coloration, this is expected from Beer's Law.

Declarant opines that one of ordinary skill would not have had a reasonable expectation of success in using a complex red cabbage extract in place of the simple organic molecule of Fisher, but cabbage extract is used as a pH indicator, so it is unclear why one would expect the additional compounds to interfere. If the additional compounds were problematic, the extract would not be used as an indicator.

With respect to the customer letter, it is insufficient to demonstrate commercial success in that there is no evidence of market share, advertising budget or other factors that would indicate commercial success based solely on the composition itself.

10. Applicant's arguments filed November 25, 2011 have been fully considered but they are not persuasive.

Applicant argues that "red cabbage extract" is a term of art that one of ordinary skill would have understood to be commercially available concentrated red cabbage extract. This argument is not persuasive because applicant previously indicated that

one of ordinary skill would have known how to make cabbage extract as evinced by www.chemistrvland.com/CHM_107Lab/Lab_1/Lab_1_PreparingCabbageExtract.htm, made of record June 22, 2010, which does not provide any concentration after aqueous extraction of an indeterminate quantity of cabbage with an indeterminate quantity of water. Thus, there are plural methods of making cabbage extract known to one of ordinary skill, and the disclosure as filed provides no direction as to which method is to be used. There is no indication in the disclosure as filed that a commercial product was used.

11. Applicant argues that one of ordinary skill in the art of Fisher would not have looked to the teachings of Freadman because Freadman is directed to detecting bacteria in food. In response to applicant's argument that Freadman is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Freadman is reasonably pertinent in that the teaching is directed to pH indicators which may be used interchangeably.

Applicant argues that one of ordinary skill would not have had a reasonable expectation of success in using a complex red cabbage extract in place of the simple organic molecule of Fisher, but cabbage extract is used as a pH indicator, so it is unclear why one would expect the additional compounds to interfere.

Applicant argues that there was a long felt need for an agricultural compound with a natural indicator, but provides no evidence to support this assertion, but rather opinion.

Applicant argues that the instant invention is an unexpected result, but from Exhibit C of the declaration filed November 25, 2011, at approximately 0.07% indicator, grape skin, cabbage and lichen all show a coloration of 1 and at 0.20%-0.25%, grape skin and cabbage both show a coloration of 4. Grape skin and lichen were not tested at the higher concentrations that red cabbage was; thus it cannot be determined whether an unexpected result was achieved. Further, the footnote indicates that the literature suggests that grape skin extract may not be stable at certain pH values. If the literature suggests this, how is instability an unexpected result? Further, the instant specification indicates that grape skin is the preferred embodiment (p. 3, lines 4-5), but applicant is now indicating that red cabbage unexpectedly works better.

Applicant argues that the instant product has been commercially successful, but there is no evidence of market share, advertising budget or other factors that would indicate commercial success based solely on the composition itself.

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jan M. Ludlow whose telephone number is (571) 272-1260. The examiner can normally be reached on Monday, Tuesday and Thursday, 11:30 am - 8:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill A. Warden can be reached on (571) 272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jan M. Ludlow

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Primary Examiner
Art Unit 1797

/Jan M. Ludlow/
Primary Examiner, Art Unit 1797